

# Radiation Test Analyst

## THE COMPANY

EmTDLab is a company incepted in 2018 with the vision to advance the future of space exploration.

Effective shielding against space radiation remains one of the most challenging concerns of space missions, from satellite on-board systems to deep space human flight. Our goal is to participate in the discovery of entirely new materials for space radiation shielding.

## THE POSITION

EmTDLab is growing and actively recruiting a Radiation Test Analyst who will report to the Radiation Simulation and Effects Engineer. This position aims to support our fundamental goal of discovering a generation of entirely new materials for space radiation shielding.

We are looking to hire a creative, self-starting scientist or engineer with a profound desire to learn and innovate.

As a key member of the R&D team, you will be responsible for supporting radiation test efforts by employing knowledge of radiation effects and their interactions in materials. You will design and support test campaigns, analyze the resultant test data to assess compliance to specifications and requirements, and develop test reports.

As a team member, you will develop your own internal and external networks and cultivate collaboration across multi-disciplinary team members that include systems engineers, computational chemist, computational mechanics scientists, materials scientist and software developers.

## SCOPE AND DESCRIPTION OF RESPONSIBILITIES

- Conceive, organize and execute experimental radiation test campaigns aimed at evaluating material shielding performances against radiation.
- Develop test requirements for radiation testing of materials.
- Perform post-irradiation data analysis.
- Document test plans, test results, and analyses.
- Follow industry and company best practices and style guides for development and version control of test reports and related analysis work products.
- Travel time: up to 30% of time per month depending on the testing request.
- Willingness to work during nights and weekends as needed for the experimental campaign.

## REQUIREMENTS

### Degree

- Master's Degree studies or equivalent relevant experience in the field of Applied Physics, Engineering, radiation testing, and similar disciplines.

### Personal, interpersonal skills and experience

- Excellent written and verbal communication skills.

- Fluent in English.
- Proven ability to communicate, collaborate, and deliver results in a fast paced, multitasking environment.
- Ability to work unsupervised and autonomously.
- Experience with irradiation test plan and report generation.
- Experience of collaboration with programmers.
- Work experience can be minimal, but a proven track record of fast learning is then required.

**The ideal candidate would have the following technical knowledge and skills:**

- Strong knowledge of physics processes driving particle beam interaction.
- Experience with modelling and simulation of beam-matter interactions and radiation effects.
- Experience on material radiation testing: radiation environment, test conditions, requirements and standards, test preparation, data analysis and reporting.
- Mastery of radiation shielding analysis tools (including Geant4, CRÈME, Root, Lise++, SRIM, etc.).
- Good knowledge of modern programming techniques, modelling and simulation of radiation environments and effects.
- Knowledge and application of instrumentation and measurement techniques.
- Computational experience in programming languages including C++ / Python / Matlab.
- Proficiency in MS office Tools, Word, PowerPoint, Excel.
- Excellent analytical skills and formal report writing skills.
- Real knowledge or proven interest in aerospace systems, aerospace materials, space industry.

**WHAT WE OFFER**

EmTDLab is a freshly incorporated company in Luxembourg. EmTDLab promotes a work culture driven by technical excellence, transparency, integrity, respect and humour. We encourage diversity in backgrounds. Your appetite for creativity, innovation, intellectual curiosity will be deeply appreciated.

We work according to flexible organizational principles with respect to work location, working hours and contractual agreements (e.g. part-time work and full-time work). We expect that each team member fulfils her/ his objectives as a part of the company's objective with little constraint added to your research work.

We although expect that we all work as professionals and all respect common sense business logic, commonly agreed research practices, quality assurance and quality control. We are an open door policy company where team communication is considered as critical for success.

We offer a remuneration package in line with the market, including yearly bonuses and training opportunities.

The main place of work (headquarters) is the Grand Duchy of Luxembourg.

The present job offering also covers provisional recruitment for the Kingdom of Belgium.

Candidates from any third-country national (a person who is not an EEA national – i.e. from an EU Member State, Iceland, Norway and Liechtenstein – or a Swiss Confederation national) space are encouraged to apply under a residency permit application.

### **APPLICATION PROCESS**

Please send the following information to [jointheteam@emtdlab.com](mailto:jointheteam@emtdlab.com) :

- An up-to-date resume.
- A short introduction letter.
- The name of at least two references (MSc supervisors/current employers).
- A copy of your obtained diploma and educational certificates.
- Papers, publications, non-confidential papers and previous technical use cases, if any.

Two rounds of interview will take place in total either through videoconferencing or face-to-face.

*It is the policy of EmTDLab to provide equal employment opportunity without regard to race, colour, religion, age, national origin, sex, gender, sexual orientation, gender identity/expression, disability, health status, genetic information, or any other basis, protected by data privacy, institutional policy or by state or local laws unless such distinction is required by law.*